

Delete the third full paragraph at page 21, line 11, and insert therefor the following:

--FIGURES 12B-12L. Nucleotide sequence for pICAST OMC (SEQ ID NO: 03).--

Delete the fifth full paragraph at page 21, line 11, and insert therefor the following:

--FIGURES 13B-13L. Nucleotide sequence for pICAST OMN (SEQ ID NO: 04).--

IN THE CLAIMS

Please amend the claims as follows:

1. (Amended) A method of assessing the effect of a test condition on G-protein-coupled receptor (GPCR) pathway activity, comprising:

a) providing a cell that expresses a GPCR as a fusion protein to a first mutant form of a reporter enzyme and an arrestin as a fusion protein to a second mutant form of the reporter enzyme complementary to the first mutant form of the reporter enzyme,

wherein said arrestin is modified to enhance binding of said arrestin to said GPCR, wherein said enhanced binding between said arrestin and said GPCR increases sensitivity of detection of said effect of said test condition;

b) exposing the cell to a ligand for said GPCR under said test condition; and

c) monitoring activation of said GPCR by complementation of said first and second mutant forms of the reporter enzyme;

wherein increased reporter enzyme activity in the cell compared to that which occurs in the absence of said test condition indicates increased GPCR interaction with the modified arrestin compared to that which occurs in the absence of said test condition, and decreased reporter enzyme activity in the cell compared to that which occurs in the absence of said test condition

Sub B1
A/C indicates decreased GPCR interaction with the modified arrestin compared to that which occurs in the absence of said test condition.

6. (Amended) A DNA molecule comprising a sequence encoding an arrestin as a fusion protein to a mutant form of a reporter enzyme, wherein said arrestin is modified to enhance binding of said arrestin to a GPCR.

7. (Amended) A DNA construct comprising the following operatively linked elements:
a promoter; and

a DNA molecule comprising a sequence encoding an arrestin as a fusion protein to a mutant form of a reporter enzyme, wherein said arrestin is modified to enhance binding of said arrestin to a GPCR.

8. (Amended) A cell transformed with a DNA construct comprising the following operatively linked elements:

a promoter; and

Sub B1
A/C a DNA molecule comprising a sequence encoding an arrestin as a fusion protein to a mutant form of a reporter enzyme, wherein said arrestin is modified to enhance binding of said arrestin to a GPCR.

9. (Amended) A method of assessing the effect of a test condition on G-protein-coupled receptor (GPCR) pathway activity, comprising:

a) providing a cell that expresses a GPCR as a fusion protein to a first mutant form of a reporter enzyme and an arrestin as a fusion protein to a second mutant form of the reporter enzyme complementary to the first mutant form of the reporter enzyme,

wherein said arrestin is modified by introducing a point mutation in a phosphorylation-recognition domain to remove a requirement for phosphorylation of said GPCR for arrestin

binding to permit binding of said arrestin to said GPCR in said cell regardless of whether said GPCR is phosphorylated,

b) exposing the cell to a ligand for said GPCR under said test condition; and

c) monitoring activation of said GPCR by complementation of said first and second mutant forms of the reporter enzyme;

wherein increased reporter enzyme activity in the cell compared to that which occurs in the absence of said test condition indicates increased GPCR interaction with the modified arrestin compared to that which occurs in the absence of said test condition, and decreased reporter enzyme activity in the cell compared to that which occurs in the absence of said test condition indicates decreased GPCR interaction with the modified arrestin compared to that which occurs in the absence of said test condition.

16. (Amended) The method of Claim 1, wherein said modified arrestin comprises conversion of Arg169 to an amino acid selected from the group consisting of histidine, tyrosine, phenylalanine and threonine.

17. (Amended) The method of Claim 1, wherein said modified arrestin comprises conversion of Val170 to alanine.

18. (Amended) The method of Claim 1, wherein said arrestin is selected from the group consisting of β -arrestin1 and β -arrestin2, and wherein said β -arrestin1 or said β -arrestin2 is truncated for all or part of a carboxyl-terminal half of said β -arrestin1 or said β -arrestin2.

20. (Amended) The method of Claim 1, wherein said arrestin is a chimera of β -arrestin1, β -arrestin2 and/or visual arrestin.

24. (Amended) The method of Claim 10, wherein said arrestin is β -arrestin2 and wherein said β -arrestin2 is mutated to convert Arg170 to an oppositely charged residue.

25. (Amended) The method of Claim 1, wherein said modified arrestin comprises